

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

LIFE TECHNOLOGIES CORPORATION
and APPLIED BIOSYSTEMS LLC,

Plaintiffs,

v.

BIOSEARCH TECHNOLOGIES, INC.,
BIO-SYNTHESIS, INC., EUROFINs
MWG OPERON INC.,

Defendants.

No. C 12-00852 WHA

**ORDER DENYING MOTION
FOR RECONSIDERATION AND
VACATING MAY 9 HEARING**

INTRODUCTION

Defendants move for reconsideration of three terms construed by a prior claim construction order (Dkt. No. 212). For the reasons stated below, the motion is **DENIED**. The hearing scheduled for May 9 is **VACATED**.

STATEMENT

Plaintiffs Life Technologies Corporation and Applied Biosystems, LLC brought this action against defendants Biosearch Technologies, Inc. and Eurofins MWG Operon, Inc., alleging infringement of U.S. Patent No. 5,538,848; U.S. Patent No. 5,723,591; U.S. Patent No. 5,876,930; U.S. Patent No. 6,030,787; and U.S. Patent No. 6,258,569. All five patents are all

1 related to a single application with the same lead inventor, Dr. Kenneth Livak. All five patents
 2 claim priority to the originally filed application (filed November 1994), which issued as the '848
 3 patent. The '591 patent and the '930 patent issued from continuation-in-parts of the '848 patent.
 4 The '787 patent and the '569 patent are successive continuations of the '930 patent. These four
 5 later-issued patents, the '591, '930, '787, and '569 patents, all have essentially identical
 6 specifications. Therefore, the citations used herein referring to the '930 patent apply to it as well
 7 as the specifications of the '591, '787, and '569 patents.

8 All patents involve monitoring the progress of DNA amplification during a polymerase
 9 chain reaction (PCR) process. The claimed inventions cover monitoring probes with reporter
 10 and quencher molecules.

11 This action was transferred from the Eastern District of Texas. Prior to the transfer,
 12 Magistrate Judge Charles Everingham construed seven terms in his September 2011 order (Dkt.
 13 No. 212). The technology background was set forth in that order. Defendants seek
 14 reconsideration of three construed terms.

15 ANALYSIS

16 Pursuant to Rule 60, a motion for reconsideration may be granted for, among other
 17 reasons, the following:

- 18 (1) mistake, inadvertence, surprise, or
excusable neglect;
- 19 (2) newly discovered evidence that, with
reasonable diligence, could not have been
20 discovered in time to move for a new trial
under Rule 59(b);
- 21 (3) any other reason that justifies relief.

22 Courts must determine the meaning of disputed claim terms from the perspective of a
 23 person of ordinary skill in the pertinent art at the time the patent was filed. *Chamberlain Group,*
 24 *Inc. v. Lear Corp.*, 516 F.3d 1331, 1335 (Fed. Cir. 2008). While claim terms are generally given
 25 their ordinary and customary meaning, the patent's specification is always highly relevant to the
 26 claim construction analysis. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–15 (Fed. Cir. 2005).
 27 Although courts have discretion to consider extrinsic evidence, including dictionaries, scientific
 28 treatises, and testimony from experts and inventors, such evidence is “less significant than the

intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317–18. Statements made by the patentee in related applications as to the scope of the invention are relevant to claim construction. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004).

1. QUENCHER MOLECULE.

The term “quencher molecule” appears in all five of the patents at issue. The prior order construed the term to mean “a molecule capable of absorbing the fluorescence energy of an excited reporter molecule, thereby quenching the fluorescence signal that would otherwise be released from the excited reporter molecule,” the express definition found in four of the five patents (’930 patent col. at 1). The prior order rejected defendants’ proposed construction that sought to limit the term “quencher molecule” to molecules that, in addition to quenching light, also *emit* fluorescent light. Defendants had sought this construction to distinguish the asserted claims from probes that utilized black hole quenchers, which do not emit light. The prior order rejected defendants’ proposed limitation, holding that the patents’ prosecution history showed no intention of disavowing quenchers that do not emit light.

The prior order has ample support for its construction. The specifications’ express definition of “quencher molecule” did not limit quencher molecules to only those that emitted light. This construction was also supported by language used in the claims. Some claims specifically limited the type of quencher molecules to “*fluorescent* quencher molecules” while others did not include the “fluorescent” modifier. This strongly suggests that a person of ordinary skill would have read some claims to encompass quencher molecules that only emitted light while other claims to encompass quencher molecules that did or did not emit light. In fact, the listed embodiments directly contradicts defendants’ construction (’930 patent col. 11):

Preferably, quencher molecules are also organic dyes, which may or may not be fluorescent, depending on the embodiment of the invention. For example, in a preferred embodiment of the invention, the quencher molecule is fluorescent. Generally whether the quencher molecule is fluorescent or simply releases the transferred energy from the reporter by non-radiative decay, the absorption band of the quencher should substantially overlap the fluorescent emission band

1 of the reporter molecule. Non-fluorescent
2 quencher molecules that absorb energy from
3 excited reporter molecules, but which do not
4 release the energy radiatively, are referred to in the
5 application as chromogenic molecules.

6 Defendants argue that the prosecution history of the '930 patent shows that the
7 "quencher molecule" was meant to emit light. Specifically, defendants point to the prosecution
8 history of claim 17, which had included a limitation that the ratio of fluorescence intensities of
9 the reporter and the quencher was calculated. The Examiner rejected the claim as indefinite:

10 Claim 17 is indefinite in the recitation of the "ratio
11 of fluorescent intensities of said reporter molecule
12 to said quencher molecule" in that the quencher
13 molecule in this claim was not recited as being
14 fluorescent so it is unclear what "intensities" are
15 actually being compared to arrive at a ratio.

16 (Dkt. No. 192-1, '930 Prosecution History, January 21, 1997 Office Action). In response, the
17 patentee amended the claim to recite "fluorescent quencher." Defendants argue that this was a
18 direct disavowal of non-fluorescent quenchers. Not so. This amendment supports the prior
19 construction that not all quenchers emit light. If all quenchers were fluorescent, the amendment
20 would have been unnecessary. At most, this amendment suggests whenever a claim includes a
21 limitation of a "ratio of fluorescence intensity," this means that the quencher must emit light.
22 The prosecution history is insufficient to suggest that whenever the term "quencher molecule" is
23 used it means a quencher molecule that emits light. That is, some claims require that the
24 quencher molecule emit light but the term "quencher molecule" does not.

25 Defendants have not met their burden to show that the prior construction was incorrect
26 and therefore the motion for reconsideration of "quencher molecule" is **DENIED**.

27 **2. HAIRPIN STRUCTURE.**

28 The term "hairpin structure" appears in four of the five of the patents at issue ('591
patent, '930 patent, '787 patent, and '569 patent). The prior order construed the term to mean
"where the probe hybridizes to itself to form a loop such that the quencher molecule is brought
into proximity with (nearby) the reporter molecule in the absence of a complementary nucleic
acid sequence to prevent the formation of the hairpin structure," the express definition in the
patents ('931 patent col. at 1). The prior court rejected defendants' proposed construction that

1 had sought to exclude quencher and reporter molecules from the definition of “hairpin
2 structure.”

3 The prior order’s construction matches the express description provided in the patents’
4 specifications. Because the definition of “hairpin structure” is provided in the specification, the
5 inventor’s lexicography controls. *Phillips*, 415 F.3d at 1312–13.

6 Defendants argue that the prior construction is narrower than the plain meaning of
7 “hairpin structure,” which ordinary means structure consisting of a base paired double-helical
8 region, the stem, with a loop of unpaired bases at one end (without reporter and quencher
9 molecules). This is conceded by plaintiffs. Nevertheless, a person of ordinary skill would have
10 understood that the “hairpin structure” term in the asserted patents specifically meant a hairpin
11 structure that brought report and quencher molecule closer together. This becomes clear after
12 understanding the purported innovation of the patents. The term “hairpin structure” was
13 included in the patent claims as a negative limitation. The specifications distinguished the
14 claimed invention from the prior art that used self-hybridizing hairpin probes in hairpin
15 structures (’930 patent col. 1). This was done because prior-art probes utilizing hairpin
16 structures were less effective than the claimed invention, even though the prior-art hairpin
17 structures also brought reports and quenchers closer together, because these types of hairpin
18 structures interfered with the probe’s hybridization to DNA.

19 Defendants have not met their burden to show that the prior construction was incorrect
20 and therefore the motion for reconsideration is **DENIED**.

21 **3. MONITORING THE FLUORESCENCE.**

22 The term “monitoring the fluorescence” appears in three of the five of the patents at
23 issue (’848 patent, ’930 patent, and ’787 patent). The prior order held that no construction of
24 this term was necessary. Defendants had sought to exclude real-time monitoring from the term
25 “monitoring.” The prior order rejected this limitation and held that “monitoring” encompassed
26 real-time monitoring.

27 The patents’ specifications expressly discussed real-time monitoring of the DNA
28 amplification process. In fact, the patents at issue all cited to 1992 and 1993 publications

1 disclosing monitoring fluorescence during PCR amplifications in “real time” (’848 patent col.
2 1). The 1992 article disclosed a method by which “amplification can be continuously monitored
3 in order to follow its progress” (Dkt. No. 201, Exh. Y at 415). The 1993 article disclosed “a
4 simple, quantitative assay for any amplifiable DNA sequence that uses a video camera to
5 monitor multiple polymerase chain reactions (PCRs) simultaneously over the course of
6 thermocycling (Dkt. No. 201, Exh. Z at 1026). These two references show that a person of
7 ordinary skill, reading the patents at issue, would have understood “monitoring the
8 fluorescence” to mean continuous real-time monitoring during the DNA amplification process.
9 There is nothing in the patents or the prosecution history to suggest that real-time monitoring
10 was not encompassed by the claims.

11 Defendants argue that in 1994, when the ’848 patent was filed, the specification’s
12 discussion of real-time monitoring only revealed the inventors’ not-yet-achieved desire to use
13 their innovative dual-labeled probe for real time analysis. As support, defendants cite a 1996
14 article by the lead inventor. The 1996 article stated that the ability to monitor PCR reactions
15 using dual-labeled probes in real-time was “novel” (Dkt. No. 192, Exh. C at 986). Defendants’
16 argument is unpersuasive. The 1996 article stated that its “goal was to develop a high-
17 throughput” methodology for such real time measurements (*id.* at 987). The mere fact that the
18 article disclosed “a novel ‘real time’ quantitative PCR method . . . resulting in much faster and
19 higher throughput assays,” did not mean that there were no other real-time monitoring methods
20 already in existence. In fact, the article specifically cited the 1992 article discussed above as
21 disclosing another method by which real-time PCR can be performed (*id.* at 992). Thus, the
22 1996 article does not stand for the proposition that skilled artisans would not have understood
23 monitoring to mean real-time monitoring in November 1994 when the ’848 patent was filed.

24 Defendants also argue that because the 1992 and 1993 articles described real-time
25 monitoring with a different type of fluorescent probe, the technology for real-time monitoring
26 was not available for dual-label probes, the patented inventions at issue. This is unpersuasive.
27 Because the 1992 and 1993 articles disclosed techniques to measure the intensity of
28 fluorescence, skilled artisans in November 1994 might have been able to adapt the real-time

1 monitoring technology disclosed in the 1992 and 1993 articles to dual-labeled probes. The
2 inventors of the patent in suit discussed this possibility in the specifications. Defendants have
3 not shown that this was unreasonable and that the inventors' discussion of real-time monitoring
4 was only wishful thinking.

5 Defendants have not met their burden to show that the prior construction was incorrect
6 and therefore the motion for reconsideration is **DENIED**.

7 **CONCLUSION**

8 For the reasons stated, the motion for reconsideration is **DENIED**. The hearing scheduled
9 for May 9 is **VACATED**.

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11 **IT IS SO ORDERED.**

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13 Dated: May 1, 2012.

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16 WILLIAM ALSUP
17 UNITED STATES DISTRICT JUDGE
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